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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.

EXAMINER	
ART UNIT	PAPER NUMBER
	11

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

1- File Copy

Office Action Summary

Application No.	Applicant(s)
08/939,905	Gijzen
Examiner	**Group Art Unit**
Ardin Marschel	1631

X Responsive to communication(s) filed on Oct 5, 1999 (Status Request)

This action is **FINAL.**

Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

X Claim(s) 1-29 is/are pending in the applicat

Of the above, claim(s) _____ is/are withdrawn from consideration

Claim(s) _____ is/are allowed.

Claim(s) _____ is/are rejected.

X Claim(s) 1-29 is/are objected to.

Claim(s) _____ are subject to restriction or election requirement.

Claims _____

Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on _____ is/are objected to by the Examiner.

The proposed drawing correction, filed on _____ is approved disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All Some* None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) _____.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

X Notice of References Cited, PTO-892

X Information Disclosure Statement(s), PTO-1449, Paper No(s). (6 sheets)

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

The art unit designated for this application has changed. Applicant(s) are hereby informed that future correspondence should be directed to Art Unit 1631.

Upon reconsideration of the instant application the potential reference that was indicated as being relevant to the examination of this application has recently become unavailable as an issue of concern regarding the instant application. Thus, the suspension, mailed 10/1/98, is hereby withdrawn and prosecution is hereby resumed.

This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR § 1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 CFR § 1.821 through 1.825 because the sequences which are present in the specification have not been amended to include the corresponding SEQ ID Nos. therewith. For example, sequences are present on pages 25 and 28 but without any SEQ ID Nos. cited therewith. Sequences which come under these rules are also contained in the instant Figures. It is noted, however, that SEQ ID Nos. are not required for such sequences in the Figures, even though the sequence listing must contain the sequences. Applicants are given the same response time regarding this failure to comply as that set forth to respond to this office action.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which

the claims are directed. The title includes a regulatory region and peroxidase only whereas compositions containing claimed DNA, such as host cells and transgenic plants, as well as methods for peroxidase and gene production are also claimed. It is also noted that although the title includes "peroxidase" that no peroxidase per se is claimed.

Claims 19-29 are rejected under 35 U.S.C. § 112, first paragraph, because the specification, while being enabling for host cell and transgenic plant embodiments, or methods of use thereof, wherein soybean seed coat host cells are present in order to express a coding segment utilizing regulatory region within bases 1-1532 of instant SEQ ID NO: 2, does not reasonably provide enablement for any host cell or transgenic or methods of use for expression from the regulatory region 1-1532. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make/use the invention commensurate in scope with these claims.

Factors to be considered in determining whether a disclosure would require undue experimentation have been summarized in Ex parte Forman, 230 USPQ 546 (BPAI 1986) and reiterated by the Court of Appeals in In re Wands, 8 USPQ2d 1400 at 1404 (CAFC 1988). The factors to be considered in determining whether undue experimentation is required include: (1) the quantity of experimentation necessary, (2) the amount or direction presented, (3) the presence or absence of working examples, (4) the nature

of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims. The Board also stated that although the level of skill in molecular biology is high, the results of experiments in genetic engineering are unpredictable. While all of these factors are considered, a sufficient amount for a *prima facie* case are discussed below.

The expression of a coding segment or gene of interest regarding the practice of the instant invention includes the usage of regulatory region bases 1-1532 of instant SEQ ID NO: 2. This region has not been characterized nor found to be capable of expressing a coding segment other than in soybean seed coat cells. The state of regulatory region knowledge yet is insufficient to merely examine the sequence and thus predict what types of host cells would predictably result in expression from such a regulatory region. This unpredictability supports this rejection.

Claims 3, 4, 17, and 25 are rejected under 35 U.S.C. § 112, first paragraph, because the specification, while being enabling for DNA molecules containing at least the regulatory sequence in bases 1-1532 in active form or, alternatively, DNA sequences which have a very high percentage sequence homology over its full length thereby giving it usefulness as a hybridization probe; does not reasonably provide enablement for any substantially

homologous DNA sequence. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make/use the invention commensurate in scope with these claims.

Factors to be considered in determining whether a disclosure would require undue experimentation have been summarized in Ex parte Forman, 230 USPQ 546 (BPAI 1986) and reiterated by the Court of Appeals in In re Wands, 8 USPQ2d 1400 at 1404 (CAFC 1988). The factors to be considered in determining whether undue experimentation is required include: (1) the quantity of experimentation necessary, (2) the amount or direction presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims. The Board also stated that although the level of skill in molecular biology is high, the results of experiments in genetic engineering are unpredictable. While all of these factors are considered, a sufficient amount for a *prima facie* case are discussed below.

Instant claims 3, 4, 17, and 25 are inclusive of any substantially homologous sequence to SEQ ID NO: 2. For these claims, the substantial homology lacks any specific limitation directed to useful embodiments. Claim 3, for example, as presently worded, would include coding sequence for inactive

peroxidase or even sequences of undefined complementarity such that cross hybridization to undesired sequences would occur unpredictably in hybridization assays. No guidance as to what bases could or could not be changed while leaving the peroxidase still active has been instantly disclosed. With 3 X 352 bases in the coding region the number of bases that may be changed is 1056. It is deemed undue experimentation to prepare peroxidase which is useful as an active enzyme for embodiments other than that which has been instantly defined as the peroxidase encoded by instant SEQ ID NOs: 1 or 2 due to a complete arbitrariness being required for selecting base changes that may yet result in encoding an active enzyme. Regarding usage as a hybridization probe, there is no instant definition of what homologous sequences would or would not cross hybridize. There are no negative control nucleic acids nor hybridization conditions instantly defined in order to design a reasonably specific hybridization probe. Thus, this probe design would be undue experimentation.

Claims 20, 28, and 29 are rejected, as discussed below, under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 20 is vague and indefinite as to what metes and bounds are meant for the expression of the DNA in the vector which contains "the DNA molecule" of claim 2 via claim 16. The DNA molecule of claim 2 may optionally include only the regulatory

sequence 1-1532 as cited therein. In this option, there is nothing to express. In fact the regulatory sequence itself is generally not expressed but rather a sequence that is downstream from such a regulatory sequence. Thus, the DNA molecule cited in claim 2 would generally only be expressed to the extent of some additional coding segment beyond the regulatory segment. Thus, there generally would never be a complete expression of "the DNA molecule" cited in claim 20 but rather only what it controls as to a gene of interest, for example. Thus, it is confusing as to what is meant in claim 20 wherein apparently there is normally no capability to express the entire DNA molecule therein cited but rather only what is controlled as to expression by the regulatory region given as bases 1-1532. Clarification is requested via clearer claim wording as to what is meant to be expressed in instant claim 20. Claims 28 and 29 also are vague and indefinite as citing the expression of a vector of claim 16 without requiring that the vector contain the gene of interest in said vector.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or

on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 3 and 4 are rejected under 35 U.S.C. § 102(a) as being clearly anticipated by Huangpu et al.

Since the previous office action, mailed 10/1/98, new evidence has been provided in the form of a sequence match between instant SEQ ID NO: 1 and the seed coat peroxidase sequence of Huangpu et al. This match result is given below as follows:

```
DEFINITION  Glycine max seed coat peroxidase isozyme (SPOD4.1) mRNA, partial
            CDS.
ACCESSION   U41657
NID         g1125103
KEYWORDS    .
SOURCE      soybean strain=Williams 82Highly.
  ORGANISM  Glycine max
            Eukaryotae; mitochondrial eukaryotes; Viridiplantae;
            Charophyta/Embryophyta group; Embryophyta; Magnoliophyta;
            Magnoliopsida; Rutanae; Sapindales; Fabaceae; Papilionoideae;
            Glycine.
REFERENCE   1  (bases 1 to 1031)
  AUTHORS   Huangpu,J., Graham,M.C. and Graham,J.S.
  TITLE     Cloning of a soybean cDNA (Accession No. U41657) encoding the
            abundant anionic seed coat peroxidase (PGR95-136)
  JOURNAL   Plant Physiol. 110, 714 (1996)
REFERENCE   2  (bases 1 to 1031)
  AUTHORS   Huangpu,J., Graham,M.C. and Graham,J.S.
  TITLE     Direct Submission
  JOURNAL   Submitted (30-NOV-1995) John S. Graham, Biological Sciences,
            Bowling Green State University, Life Sciences Building, Bowling
            Green, OH 43403-0212, USA
FEATURES             Location/Qualifiers
     source          1. .1031
                     /organism="Glycine max"
                     /strain="Williams 82Highly"
                     /db_xref="taxon:3847"
     gene            1. .852
                     /gene="SPOD4.1"
     CDS             <1. .852
                     /gene="SPOD4.1"
                     /EC_number="1.11.1.7"
                     /note="H2O2 oxidoreductase"
                     /codon_start=1
```

/product="seed coat peroxidase isozyme"
/db_xref="PID:g1125104"
/translation="FHDCFVQGCDGSVLLNNTDTIESEQDALPNINSIRGLDVVNDIK
TAVENSCPDTVSCADILAIAAEIASVAGRRSGWPVPLGRRDSLTANRTLANQNLPAPF
FNLTQLKASFAVQGLNTLDLVTLSGGHTSGRARCSTFINRLYNFSNTGLIHLDTTYLE
VLRARCPQNATGDNLTNLDLSTPDQFDNRYYSNLLQLNGLLQSDQERFSTPGADTIPL
SIASANQNTFFSNFRVSMIKMGNIGVLTGDEGEIRLQCNFVNGDSFGLASVASKDAKQ
KLVAQSK"

BASE COUNT 324 a 209 c 207 g 291 t
ORIGIN

Query Match 74.1%; Score 922; DB 19; Length 1031;
Best Local Similarity 97.9%; Pred. No. 0.00e+00;
Matches 1004; Conservative 0; Mismatches 10; Indels 12; Gaps 9;

```
Db      1 TTTCATGATTGCTTTGTTCAAGGTTGTGATGGATCAGTTTTACTGAACAACACTGATACA 60
          |
Qy    199 TTTCATGATTGCTTTGTTCAAGGTTGTGATGGATCAGTTTTGCTGAACAACACTGATACA 258

Db     61 ATAGAAAGCGAGCAAGATGCACTTCCAAATATCAACTCAATAAGAGGATTGGACGTTGTC 120

Qy    259 ATAGAAAGCGAGCAAGATGCACTTCCAAATATCAACTCAATAAGAGGATTGGACGTTGTC 318

Db    121 AATGACATCAAGACAGCGGTGGAAAATAGTTGTCCAGACACAGTTTCTTGTGCTGATATT 180

Qy    319 AATGACATCAAGACAGCGGTGGAAAATAGTTGTCCAGACACAGTTTCTTGTGCTGATATT 378

Db    181 CTTGCTATTGCAGCTGAAATAGCTTCTGTTGCTGGGAGGAGGTC-AGGATGGCCAGTTCC 239
                              |                      |
Qy    379 CTTGCTATTGCAGCTGAAATAGCTTCTGTT-CTGGGAGGAGGTCCAGGATGGCCAGTTCC 437

Db    240 ATTAGGAAGAAGGGACAGCTTAACAGCAAACCGAACCCTTGCAAATCAAAACCTTCCAGC 299

Qy    438 ATTAGGAAGAAGGGACAGCTTAACAGCAAACCGAACCCTTGCAAATCAAAACCTTCCAGC 497

Db    300 ACCTTTCTTCAACCTCACTCAACTTAAAGCTTCCTTTGCTGTTCAAGGTCTCAACACCCT 359

Qy    498 ACCTTTCTTCAACCTCACTCAACTTAAAGCTTCCTTTGCTGTTCAAGGTCTCAACACCCT 557
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Db     360 TGATTTAGTTACACTCTCAGGTGGTCATACGTCTGGAAGAGCTCGGTGCAGTACATTCAT 419
Qy     558 TGATTTAGTTACACTCTCAGGTGGTCATACGTTTGGAAGAGCTCGGTGCAGTACATTCAT 617

Db     420 AAACCGATTATACAACTTCAGCAACACTGGA----CTGATCCA-CT-TGGACACAACATA 473
Qy     618 AAACCGATTATACAACTTCAGCAACACTGGAAACCCTGATCCAACTCTGAACACAACATA 677

Db     474 CTTAGAAGTATTGCGTGCAAGATGCCCCCAGAATGCAACTGGGGATAACCTCACCAATTT 533
Qy     678 CTTAGAAGTATTGCGTGCAAGATGCCCCCAGAATGCAACTGGGGATAACCTCACCAATTT 737

Db     534 GGACCTGAGCACACCTGATCAATTTGACAACAGATACTACTCCAATCTTCTGCAGCTCAA 593
Qy     738 GGACCTGAGCACACCTGATCAATTTGACAACAGATACTACTCCAATCTTCTGCAGCTCAA 797

Db     594 TGGCTTACTTCAGAGTGACCAAGAACGTTTCTCCACTCCTGGTGCTGATACCATTCC-AT 652
Qy     798 TGGCTTACTTCAGAGTGACCAAGAACTTTTCTCCACTCCTGGTGCTGATACCATTCCCAT 857

Db     653 TGTCAATAGCTTCAGC-G-AACCAGAATACTTTCTTTTCCAACTTTAGAGTTTCAATGAT 710
Qy     858 TGTCAATAGCTTCAGCAGTAACCAGAATACTTTCTTTTCCAACTTTAGAGTTTCAATGAT 917

Db     711 AAAAATGGGTAATATTGGAGTGCTGACTGGGGATGAAGGAGAAATTCGCTTGCAATGTAA 770
Qy     918 AAAAATGGGTAATATTGGAGTGCTGACTGGGGATGAAGGAGAAATTCGCTTGCAATGTAA 977

Db     771 TTTTGTGAATGGAGACTCGTTTGGATTAGCTAGTGTGGCGTCCAAAGATGCTAAACAAAA 830
Qy     978 TTTTGTGAATGGAGACTCGTTTGGATTAGCTAGTGTGGCGTCCAAAGATGCTAAACAAAA 1037

Db     831 GCTTGTTGCTCAATCTAAATAAACCAATAATTAATGGGGATGTCGATGCTAGCTACGATG 890
Qy    1038 GCTTGTTGCTCAATCTAAATAAACCAATAATTAATGGGGATGTGCATGCTAGCTAGCATG 1097
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Db    891 TAAAGGCAAATTAGGTTG-AAACCTCTTTGCTAGCTATATTGAAATAAACCAAAGGAGTA 949
                            |
Qy   1098 TAAAGGCAAATTAGGTTGTAAACCTCTTTGCTAGCTATATTGAAATAAACCAAAGGAGTA 1157

Db    950 GTGTCGATGTCAATTCGATTTTGCCATGTACCTCTTGGAATATTATGTAATAATTATTTG 1009
           ||
Qy   1158 GTGTGCATGTCAATTCGATTTTGCCATGTACCTCTTGGAATATTATGTAATAATTATTTG 1217

Db   1010 AATCTC 1015

Qy   1218 AATCTC 1223
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The sequence of the reference is labeled as Db and the majority of the bases in instant SEQ ID NO: 1 is labeled as Qy. Mismatches are shown by the symbol "|" between the sequences. This alignment results in supplying evidence that the peroxidase sequence of the reference matches 1015 bases minus the mismatches of which there are 22. This equals 993 bases that match in the alignment. Instant SEQ ID NO: 1 is 1244 bases long. A 993 base matching sequence is 79.8% sequence matching or homology or sequence identity. It is noted that within the partial, albeit the majority thereof, coding sequence match as given above the matching is 993 bases out of 1015 which is 97.8%. Huangpu et al. disclose the cloning of a partial mRNA into cDNA and discuss certain aspects of the sequencing results as discussed in the citation. It is noted that the instant SEQ ID NO: 2 is longer than instant SEQ ID NO: 1 and is genomic in nature. Thus, for comparing the sequence of the reference to SEQ ID NO: 2 the percentage sequence match is 993 of 4700 or 21.1%. Although this is a lesser percentage than the comparison to instant SEQ ID NO:

1 the match covers the clear majority of the coding sequence which is reasonably interpreted as the most important segment in SEQ ID NO: 2. Also, the limitation in instant claims 3 and 4 does not define in any clear way whether the substantial homology is calculated with 100% being instant SEQ ID NO: 2 or is based on the sequence being matched to instant SEQ ID NO: 2 which is the reference sequence. If one reasonably interprets that the substantial homology may utilize the reference sequence then the match is 97.8% which is clearly substantially homologous and clearly anticipates instant claims 3 and 4. A thorough consideration of the instant specification has failed to reveal any specific definition of what is meant by the limitation "substantially homologous" and thus may be interpreted as is reasonable as given above. This supplies evidence that a substantially homologous DNA molecule was known by others in the prior art thus supporting this rejection under 35 U.S.C. § 102(a) as required in instant claims 3 and 4.

Claims 3 and 4 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by the Sigma Chemical Company 1990 Catalog.

As noted in the above rejection the basis for the substantial homology limitation of instant claims 3 and 4 is not specifically limited. Thus, if 100% of a sequence that is disclosed in a reference matches with a segment of instant SEQ ID NO: 2 this may also be reasonably interpreted as disclosing a substantially homologous sequence as required in instant claim 2.

The Sigma Chemical Company 1990 Catalog discloses several oligomers of oligo(dA) as well as oligo(dT) on page 776. Certain of these oligomers exactly (100%) match segments of instant SEQ ID NO: 2. For example, The Sigma product # O 5878 is an 8-mer of oligo(dA). Such an 8 base A segment also is present in instant SEQ ID NO: 2 at bases 2682 - 2689. The Sigma product # O 8753 is a 4-mer of oligo(dC) which is also present in instant SEQ ID NO: 2 at bases 1698 - 1701. Lesser homologies are also present in that Sigma product # O 5878 matches 7 of 8 bases in instant SEQ ID NO: 2 at bases 1418 - 1425 due to one mismatch thus matching at 87.5% which is still deemed substantially homologous. Thus, these oligomers of the Sigma Chemical 1990 Catalog anticipate instant claims 3 and 4.

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claim 1 is provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 1 of copending application Serial No. 08/723,414. This is a *provisional* double patenting rejection since the conflicting claims have not in fact been patented. The wording of instant claim 1 contains

"comprising" whereas claim 1 of the copending application Serial No. 08/723,414 contains the word "having" in the corresponding location within the respective claims. This rejection is based on the interpretation that "having" and "comprising" are equivalent open claim language terms. It is noted that SEQ ID NO: 1 is the identical in both applications.

The non-statutory double patenting rejection, whether of the obviousness-type or non-obviousness-type, is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent. *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); and *In re Goodman*, 29 USPQ2d 2010 (Fed. Cir. 1993).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(b) and (c) may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.78(d).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-29 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of copending application Serial No. 08/723,414. Although the conflicting claims are not identical, they are not patentably distinct from each other because it is noted that instant SEQ ID NO: 2 contains subsequence which is also contained within the smaller SEQ ID NO: 2 of 08/723,414; which is different only in 1341 nucleotides at the 5' end compared to instant SEQ ID NO: 2. This large subsegment in

common between these two sequences results in their sequences being clearly substantially homologous as required in instant claims 3 and 4, as well as subsequences as listed in various instant claims, but not coextensive as to embodiments within their respective scope of subject matter as claimed. The presence of these common embodiments thus supports this obviousness-type double patenting rejection. Instant claim 1 is included in this obviousness-type double patenting rejection due to common embodiments with claims 2 etc. of copending application Serial Number 08/723,414 which are different issues than the above rejection of instant claim 1 under 35 U.S.C. 101 double patenting.

This is a *provisional* obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

No claim is allowed.

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993)(See 37 CFR § 1.6(d)). The CM1 Fax Center number is either (703) 308-4242 or (703) 305-3014.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ardin Marschel, Ph.D., whose telephone number is (703) 308-3894. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, can be reached on (703) 308-4028.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technical Center receptionist whose telephone number is (703) 308-0196.

September 13, 2000

ARDIN H. MARSCHEL
PRIMARY EXAMINER